Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic : 11_Static Electricity

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Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Q1.

An atom contains electrons, neutrons and protons.
(a) Use words from the box to complete the sentences.

neutral		negative
much larger than a neutron		much smaller than a neutron
positive		the same size as a neutron
d		

(i) The charge on an electron is .....

(1)

(ii) An electron has a mass that is .....

(1)

(b) At a petrol station, a pipe is used to transfer petrol to the storage tanks.

The pipe is earthed.

There is friction between the petrol and the end of the pipe.

(i) Explain why it is dangerous **not** to earth the pipe.

(2)

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(ii) Explain how earthing the pipe makes this process much safer.

(2)

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*(c) The photographs show some electrostatic effects.

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positively charged balloon near hair



positively charged rod near some paper



positively charged balloon near a thin stream of water

Explain in terms of electric charges how one of these effects is caused.
You may include diagrams to help with your answers.

(6)

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(Total for Question is 12 marks)

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Q2.

A plastic rod and a piece of cloth are both uncharged.

A student rubs the plastic rod with the cloth.

The plastic rod becomes negatively charged.

(i) Compared with the plastic rod, which row of the table is correct for the charge on the cloth?

Put a cross (☒) in the box next to your answer.

(1)

	sign of charge	size of charge
☐ **A**	positive	equal
☐ **B**	negative	equal
☐ **C**	positive	bigger
☐ **D**	negative	bigger

(ii) Explain how the plastic rod becomes negatively charged.

(2)

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(iii) The student then holds the plastic rod near to a stream of water coming from a tap.

The stream of water bends towards the plastic rod.

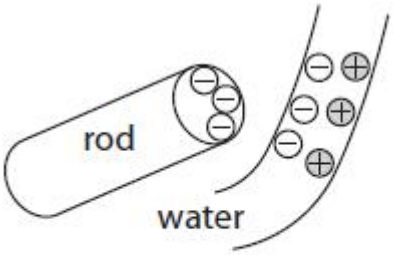


Which picture shows the correct arrangement of charges in the stream of water?

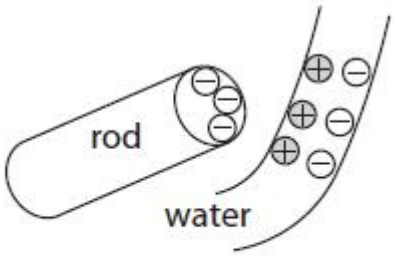
Put a cross (☒) in the box next to your answer.

(1)

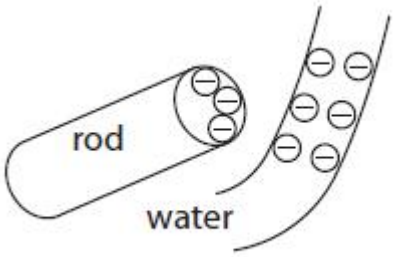
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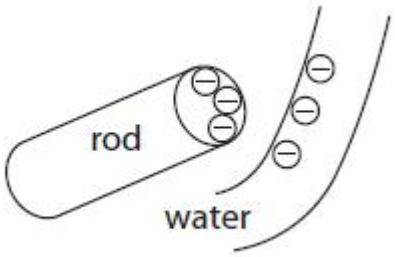
☒ **A**



☒ **B**



☒ **C**



☒ **D**

(iv) The student puts the plastic rod into the stream of water and pulls it out.

Now, when he holds the plastic rod near the stream of water, the stream of water does not bend.
Suggest why the stream of water does not bend.

(1)

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